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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/561,796

12/21/2005

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4702-38

5863

23117 7590 04/27/2010
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EXAMINER

WOOD, ELLEN S

ART UNIT

PAPER NUMBER

1782

MAIL DATE

DELIVERY MODE

04/27/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/561,796
Filing Date: December 21, 2005
Appellant(s): BETTONVILLE ET AL.

Leonard C. Mitchard
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 02/10/2010 appealing from the Office action mailed 01/06/2010.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1-10, 12 and 13.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office

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action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

20040191440	Funaki et al.	09-2004
EP1201711	Duprie et al.	05-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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2. Claims 1-10 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duprie et al. (EP1201711, hereinafter "Duprie") in view of Funkai et al. (US 2004/0191440, hereinafter "Funkai").

In regards to claims 1-3 and 12, Duprie discloses pipes which are referred to as "PE 80" and "PE 100" [0009]. These are polyethylene resins which when formed into pipes of specific dimensions, survive a long term pressure test at different temperatures for a period of 5,000 hours. According to the applicant a pressure pipe is a pipe having a pressure rating of PE 80 and above (pg. 1 lines 22-23). Thus, the pipes of Duprie are considered pressure pipes. The polyethylene pipe resin has a bimodal molecular weight distribution [0016]. The polyethylene resin comprises 35 to 49 wt% of a first polyethylene fraction of high molecular weight having a density of up to 0.930 g/cm^3 and from 51 to 65 wt% of a second polyethylene fraction of low molecular weight having a density of greater than 0.946 g/cm^3 [0013].

In regards to claim 8, Duprie discloses the 35 to 49 wt% of the first polyethylene fraction comprising a linear low density polyethylene having a density of up to 0.930 g/cm^3 , and an HLMI of less than 0.6 g/10 min and 51 to 65 wt% of the second polyethylene fraction comprising a high density polyethylene having a density of at least 0.969 g/cm^3 [0013] with a MI_2 from 100 to 1000 g/10 min [0026]. The polyethylene resin having a density of greater than 0.946 g/cm^3 and an HLMI of from 1 to 100 g/10 min [0013].

In regards to claim 9, Duprie discloses forming pipes of the resin material to form "PE 100" pipes [0041].

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In regards to claim 10, Duprie discloses the pipes extrapolation shows that they have a 20°C/50 years resistance of at least 8 and 10 MPa, respectively [0009 and 0041]. This classification is described in ISO 9080 and ISO 12162 [0009 and 0041].

Duprie is silent with regards to the use of an ionomer in the polyethylene pipe resin.

Duprie discloses that the polyethylene resins according to the invention can be prepared by any method suitable [0045]. The resins are most often blended with additives [0044].

Funkai discloses that an ionomer polymer is used as an impact-reducing material in piping to improve the impact resistance [0080-0081].

It would be obvious to one of ordinary skill in the art to combine the polyethylene pipe resin of Duprie with the ionomer polymer of Funkai to produce a pipe that has increased impact resistance while maintaining the standards of pressure pipes.

(10) Response to Argument

The applicant argues that there is no suggestion to add the ionomer of Funaki into the polymer composition of Duprie, because Funaki relates to a fuel hose for automobile, whereas Duprie's polymer composition relates to a pressure pipe.

In response, Duprie's polymer composition is a blend of thermoplastic polymers and polyamides. The blend is used for pipe and hose structures. The art is analogous because both Duprie and Funaki are discussing polymer compositions for pipes and hoses. When a work is available in one field, design incentives and other market forces

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can prompt variations of it, either in the same field or in another. *KSR* at 1396. If a person of ordinary skill in the art can implement a predictable variation, and would see the benefit of doing so, § 103 likely bars its patentability. *Id.* Moreover, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond that person's skill. *Id.*

One of ordinary skill in the art at the time the invention was made, when viewing the state of the art and the predictable improvements in structures known in the art, would be motivated to improve the pressure pipes, of the prior art, with the processes and structure taught by Funkai, since the improvements of improved low temperature impact and mechanical properties were known to one of ordinary skill in the art and it would have predictably improved similar articles in the same way.

The applicant argues that Funaki does not improve the impact resistance by specifically adding an ionomer. Rather, impact resistance is improved by adding a rubbery polymer, which may itself contain an ionomer.

In response, Funaki discloses that the impact-reducing material may, for example, be an ionomer polymer [0081]. Claim 1 states an "ionomer". An ionomer is a polymer with covalent bonds between the elements of the chain and ionic bonds between the chains. Given the broadest reasonable interpretation of the claims, Funaki's ionomer polymer would be considered an ionomer.

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(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/ELLEN S WOOD/

Examiner, Art Unit 1782

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